

Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An integrated circuit comprising a network, the network comprising a plurality of routers, at least one of the routers comprising a plurality of input ports arranged to receive input data corresponding to at least two traffic classes, the routers further comprising a plurality of queues, the queues being wherein each queue of the plurality of queues is arranged to store input data corresponding to a single traffic class, wherein the input ports are coupled to at least two of the queues, the routers further comprising a switch, wherein the switch is arranged to receive input from each queue of the plurality of queues simultaneously.

2. (Currently amended) The integrated circuit as claimed in claim 1, wherein a first selection of the plurality of queues is arranged to store input data corresponding to a high priority traffic class, and wherein a second selection of the plurality of queues is

arranged to store input data corresponding to a low priority traffic class.

3. (Previously presented) The integrated circuit as claimed in claim 2, wherein the first selection is deployed to provide guaranteed communication services in the network, and wherein the second selection is deployed to provide best-effort communication services in the network.

4. (Previously presented) The integrated circuit as claimed in claim 1, further comprising a controller which is coupled to the input ports and coupled to the switch, the controller comprising a plurality of arbiters, wherein the arbiters of at least one of the traffic classes implement a predetermined schedule.

5. (Previously presented) The integrated circuit as claimed in claim 1, wherein the switch comprises a plurality of multiplexers, each multiplexer being coupled to an output port, and each one of the multiplexers being arranged to accept as input the input data stored in the queues.

6. (Currently amended) A method for avoiding starvation of data in an integrated circuit comprising a network, the network comprising a plurality of routers, at least one of the routers comprising an act of:

providing a router having a plurality of input ports receiving input data corresponding to at least two traffic classes, the routers further comprising having a plurality of queues,

wherein the queues store storing in each queue of the plurality of queues input data corresponding to a single traffic class,

coupling the input ports being coupled to at least two of the queues, the routers further comprising and

providing a switch, wherein the switch receives receiving at the switch input from each queue of the plurality of queues simultaneously.

7. (New) The integrated circuit as claimed in claim 2, wherein the switch is arranged to receive input from both a high priority traffic class and a low priority traffic class simultaneously.

8. (New) The method as claimed in claim 6, wherein the act of receiving at the switch comprises an act of receiving input from both a high priority traffic class and a low priority traffic class simultaneously.